

as the group of sheets moves through the perforation device, for at least a first sheet, receiving at the control unit a first control signal based on information specific to the first sheet;

sending, based on the first control signal, a second control signal from the control unit to the first perforating tool; and

in response to receiving the second control signal from the control unit, actuating the first perforating tool to assume the perforating position while the first sheet passes.

B 2
B 2
23. The method of claim 11, wherein, for each received sheet, the act of receiving the first control signal includes:

reading a code on the sheet with a reader.

REMARKS

In response to the Office Action mailed February 19, 2003, the Applicant respectfully requests reconsideration.

To further the prosecution of this application, amendments have been made in the claims, as illustrated in the attachment hereto, titled "Marked-up Claims."

Claims 1, 2, 11, 14, 15, 17, 22, 23, 27, 28, 30 and 35-38 have been examined. Claims 14 and 23 have been amended for clarification. As a result, claims 1, 2, 11, 14, 15, 17, 22, 23, 27, 28, 30 and 35-38 are pending for examination, of which claims 1, 11, 14 and 27 are independent.

1. Claims 14, 15, 17, 22 and 37 Satisfy the Requirements of 35 U.S.C. §112, Second Paragraph

Claims 14, 15, 17, 22 and 37 stand rejected under §112, second paragraph (Office Action, ¶2). Specifically, the Office Action states that the last two paragraphs of claim 14 have redundant recitations of moving the perforating tool into the perforating position, such that it is not clear if this move occurs once or twice.

In response, Applicant has amended claim 14 to make clear that claim 14 recites only once that the perforating tool is actuated to assume the perforating position, as illustrated in the marked up claims attachment. Accordingly, Applicant respectfully requests that the

rejection of claims 14, 15, 17, 22, and 37 under 35 U.S.C. §112, second paragraph, be withdrawn.

2. Claims 1, 2, 35 and 36 Patentably Distinguish Over Hayamizu in view of over Moll

Claims 1, 2, 35 and 36 stand rejected under 35 U.S.C. §103(a) as purportedly being unpatentable over U.S. Patent No. 4, 721,048 (Hayamizu) in view of U.S. Patent No. 5,334,126 (Moll). Applicant respectfully traverses this rejection for at least the following reasons.

2.1. Discussion of Hayamizu

Hayamizu is directed to a drawing paper cutting system for automatic drawing machines using continuous roll type drawing paper. (Col. 1, lines 6-8). Hayamizu discloses that a common problem with cutting units of drawing machines is that such machines are preconfigured to cut drawing paper to only a particular size. Thus, if a first size drawing paper, for example, A1-size drawing paper, is used to output a second-sized drawing, for example, an A4-sized drawing, the drawing paper is cut to the first size. The resulting cut paper includes blank areas, the sizes of which may be substantial relative to the amount of area consumed by the drawing itself. (Col. 1, lines 23-45). Thus, after the cutting operation is performed by the cutting unit of the drawing machine, a separate step of cutting off the excess blank portion of the cut drawing must be performed. This required extra step decreases the operating efficiency of a high-output drawing machine. (Col. 1, lines 45-54).

To solve this problem, Hayamizu discloses a paper cutting system for automatic drawing machines (Figs. 1 and 2). An output from a central control unit 1 is inputted to a drawing controller 2 of an automatic drawing machine 4. This output includes information about the desired drawing size and paper size. The automatic drawing machine 4 has a drawing-making means 3 and a drawing controller 2. The drawing-making means 3 is controlled by the drawing controller 2. Drawings 6 and coded data in the form of discriminating signals 7, which are designated by the central control unit 1, are written on a section of continuous roll type drawing paper 5. The paper 5 on which the drawings 6 and discriminating signals 7 are written is transferred to a paper cutting means 9 by a paper transfer means 8. (Col. 3, lines 11-26; Figs. 1 and 2). The discriminating signals 7 on paper 5 are read by a bar code reader 10 in the paper cutting means 9. Drawing paper 5 then is cut in accordance with the discriminating signal 7. (Col. 3, lines 28-46).

2.2 Discussion of Moll

Moll is directed to an apparatus for applying a line of perforations of controlled length to sheets of paper while they are traveling through a paper folding machine. (Col. 1, lines 6-10). Moll describes a portion of a paper folding machine 10 (Figs. 1-4; Col. 3, line 18-col. 5, line 6).

The machine 10 includes three sets of switches SWI, SWII, and SWIII. SWI sets the delay in inches from the edge of a sheet 30 being detected to the start of the line of perforations. SWII sets the distance in inches (time) from the start to the stop of a line of perforations. SWIII sets the overall size in inches of the full length of a sheet 30 (lockout) from the time it is detected through its full length, so that the apparatus only cycles once per sheet 30. (Col. 4, lines 17-24)

When it is desired to put a line of perforation 78 on a sheet 30, a single sheet 30 is placed on transport roller 11. The sheet detector 41 is set to detect a sheet 30 at a location adjacent to the fold plate 40. The sheet 30 is marked at the location where the line of perforations 78 are to begin and moved under wheel 76. The delay switch SWI is set for zero delay, and the switch SW is set to read dark to light. The switch TS is set to make ready, the lockout switch SWIII is set to the length of a single sheet 30, and the switch SWII is set to determine the length of the line perforation 78 from start to finish. (Col. 5, lines 8-24).

After the settings have been made, sheets of paper 30 are fed onto roller 11, which transports them to plate 60 and between fold rollers 58 and 65 and between wheel 76 and female collar 80. When the edge of a sheet 30 is detected by the sheet detector 41, the controller 36 is signaled by the sheet detector 41, which causes the controller to energize the solenoid 71, which moves the arm 73 and wheel 76 vertically downwardly until it contacts a sheet 30 and starts in line of perforations 78.

2.3 The Combination of Hayamizu and Moll is Improper Because Such Combination Would Render Hayamizu Unsatisfactory for Its Intended Purpose

The combination of Hayamizu and Moll is improper because there is no motivation or suggestion to combine the teachings of the two references. There is no motivation or suggestion to combine Hayamizu with Moll because such combination would render the system taught by Hayamizu unsatisfactory for its intended purpose.

MPEP §2143 (original 8th ed. August 2001, latest revision February 2003) states that, if a proposed modification would render the prior art invention being modified unsatisfactory

for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

As stated above, the system of Hayamizu eliminates the need to cut blank portions from already-cut drawing sheets, thereby increasing the operating efficiency of a high-output drawing machine. The Office Action proposes modifying the system taught by Hayamizu by replacing the cutting blade of the system with a perforating blade "in order to keep all of the product together for later disassembling." Such modification, however, would render the Hayamizu system unsatisfactory for its intended purpose of removing blank portions of cut drawing paper. Thus, such modified system would require an additional step of removing blank portions delimited by the perforations, which is the step that Hayamizu purports to eliminate.

Further, neither Hayamizu or Moll provide motivation or suggestion to combine the cutting device of a drawing machine disclosed by Hayamizu with the perforating device of a folding machine that perforates sheets of paper according to preset switches, as taught by Moll. Such motivation is found only in Applicant's specification. Using such motivation to support a §103 rejection is improper, as it employs impermissible hindsight analysis.

For at least these reasons, the combination of Hayamizu and Moll is improper.

2.4 Claim 1 Distinguishes Over the Combination of Hayamizu and Moll

As stated above, Hayamizu clearly is directed to a cutting system for a drawing machine that uses *continuous roll type drawing paper*, whereas Moll discloses a perforating system in which individual sheets of paper are fed onto a roller. Even if there were motivation to replace the cutting blade of Hayamizu with the perforating blade of Moll, which there is not, there is no motivation or suggestion to replace the continuous roll type of system disclosed by Hayamizu with a system in which individual sheets are fed to the system. The Office Action fails to specify the source of such motivation or suggestion, as such motivation is found only in Applicant's specification. Arbitrarily picking and choosing which elements from each reference to combine to produce a claimed invention is an impermissible use of hindsight analysis, which cannot serve as the basis for a rejection under §103.

Claim 1 is directed to a perforator for selectively perforating **sheets of paper of a group of sheets**, where the sheets to be perforated are selected as the group is moving successively through the perforator and the perforation is along a direction of the movement.

The perforator comprises a first perforating tool past which **one or more sheets of paper move successively**, the perforating tool having a perforating position to perforate paper passing the perforating tool, and having a neutral position to refrain from perforating paper passing the perforating tool, and having an input for receiving a first control signal. The perforator further comprises an electronic control apparatus having an input to receive a second control signal as the group of sheets moves through the perforator, and an output connected to the input of the first perforating tool. For each sheet of paper that passes the first perforating device, the second control signal is based on information specific to the sheet. The electronic control apparatus is configured such that, for each sheet of paper that passes the first perforating device, if perforation is desired for the sheet based on the second control signal, the electronic control apparatus emits a signal from the output of the electronic control apparatus to the input of the first perforating tool to place the first perforating tool in the perforating position. If perforating is not desired for the page based on the second control signal, the electronic control apparatus does not emit a signal to the first perforating tool.

Even if motivation existed to replace the cutting blade of Hayamizu with a perforating blade of Moll, as proposed by the Office Action, the Hayamizu system still would not include a first perforating tool past which *one or more sheets of paper move successively*, as recited in claim 1. In contrast, the system would employ continuous roll type drawing paper, where the paper is fed to the system as a continuous roll, as taught by Hayamizu.

Accordingly, even if Hayamizu and Moll were combined, the resulting system would not include all of the limitation of claim 1.

Therefore, for at least the above reasons, claim 1 patentably distinguishes over Hayamizu and Moll. Accordingly, Applicant respectfully requests that the rejection of claim 1 under 35 U.S.C. §103(a) as being unpatentable over Hayamizu in view of Moll be withdrawn.

Claims 2, 35 and 36, which each depend directly or indirectly from independent claim 1, are patentable over Hayamizu in view of Moll for at least the same reasons as set forth above with respect to claim 1. Accordingly, Applicant requests that the rejection of these claims under §103(a) be withdrawn.

3. Claim 11 and 23 Patentably Distinguish Over Hayamizu in View of Moll

Claims 11 and 23 stand rejected under 35 U.S.C. §103(a) as purportedly being unpatentable over Hayamizu in view of Moll. Applicant respectfully traverses this rejection for at least the following reasons.

First, as set forth above, the combination of Hayamizu and Moll is improper because such combination would render the system taught by Hayamizu unsatisfactory for its intended purpose, and because no motivation or suggestion for such combination can be found in Hayamizu or Moll. Second, even if motivation existed to combine the two references, the resulting system would not employ a method of selectively perforating sheets of paper of a group of sheets comprising, *inter alia*, successively receiving the moving sheets at the perforating device, as recited in claim 11.

For at least these reasons, claim 4, and claim 23 dependent therefrom, patentably distinguish over Hayamizu in view of Moll. Accordingly, Applicant respectfully requests that the rejection of these claims under 35 U.S.C. §103(a) be withdrawn.

4. Claims 14, 15, 17, 22 and 37 Patentably Distinguish Over Hayamizu in View of and Moll

Claims 14, 15, 17, 22 and 37 stand rejected under 35 U.S.C. §103(a) as purportedly being unpatentable over Hayamizu in view of Moll. Applicant respectfully traverses this rejection for at least the following reasons.

First, as set forth above, the combination of Hayamizu and Moll is improper because such combination would render the system taught by Hayamizu unsatisfactory for its intended purpose, and because no motivation or suggestion for such combination can be found in Hayamizu or Moll. Second, even if motivation existed to combine the two references, the resulting system would not employ a method of selectively perforating sheets of paper of a group of sheets, comprising, *inter alia*, successively receiving a plurality of sheets of paper as input to the perforating device, as recited in claim 14.

For at least these reasons, claim 14, and claims 15, 17, 22 and 37 dependent therefrom, patentably distinguish over Hayamizu in view of Moll. Accordingly, Applicant respectfully requests that the rejection of these claims under 35 U.S.C. §103(a) be withdrawn.

5. Claims 27, 28, 30 and 38 Patentably Distinguish Over Hayamizu in View of Moll

Claims 27, 28, 30 and 38 stand rejected under 35 U.S.C. §103(a) as purportedly being unpatentable over Hayamizu in view of Moll. Applicant respectfully traverses this rejection for at least the following reasons.

First, the combination of Hayamizu and Moll is improper because such combination would render the system taught by Hayamizu unsatisfactory for its intended purpose, and because no motivation or suggestion for such combination can be found in Hayamizu or Moll. Second, even if motivation existed to combine the two references, the combination would not produce a system for selectively perforating sheets of paper moving successfully through a perforating device, comprising, *inter alia*, means for successively receiving a plurality of sheets of paper as input to the perforating device, as recited in claim 27.

For at least these reasons, claim 27, and claims 28, 30 and 38 dependent therefrom, patentably distinguish over Hayamizu and Moll. Accordingly, Applicant respectfully requests that the rejection of claim 27, and claims 28, 30 and 38 dependent therefrom, under 35 U.S.C. §103(a) be withdrawn.

CONCLUSION

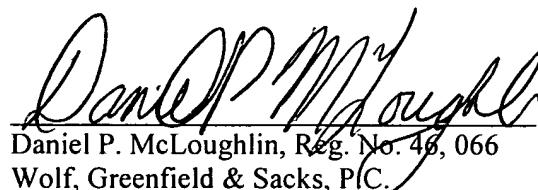
In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a

fee occasioned by this response, including an extension fee that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted
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MARKED-UP CLAIMS

14. (Twice Amended) A method of selectively perforating sheets of paper of a group of sheets, wherein sheets to be perforated are selected as the group is moving successively through a perforating device, the perforating device including a first perforating tool for perforating sheets of paper and a control unit for controlling the perforating tool, wherein the first perforating tool perforates the paper along a direction of the movement of the sheets, the method comprising acts of:

successively receiving a plurality of sheets of paper as input to the perforating device; and

positioning the first perforating tool in either a perforating position to perforate paper or a neutral position to allow paper to pass imperforated, including:

as the group of sheets moves through the perforation device, for at least a first sheet, receiving at the control unit a first control signal based on information specific to the first sheet;

sending, based on the first control signal, a second control signal from the control unit to the first perforating tool[to cause the first perforating tool to assume the perforating position]; and

in response to receiving the second control signal from the control unit, actuating the first perforating tool to assume the perforating position while the first sheet passes.

23. (Twice Amended) The method of claim 11, wherein, for each received sheet, the act of receiving the first control [the] signal includes:

reading a code on the sheet with a reader.

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